



MATERIAL SAFETY DATA SHEET
 according to Regulation (EU) No. 1907/2006

InnoFlex 60

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

Product information

Trade name : InnoFlex 60

Chemical name : BASF Ecovio

Chemical family : Compound of Polyester and Polylactic Acid.

Use : Monofilament for 3D-printing

Company : Innofil3D BV.
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 7821 AT Emmen

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2. HAZARDS IDENTIFICATION

Product definitions : Mixture

Classification according to Regulation (EG) No. 1272/2008 [CLP/GHS]:
 This product is not classified as hazardous according to Regulation (EG) 1272/2008 as amended.

Classification according to Directive 1999/45/EG [DPD]:
 The product is not classified as dangerous according to Directive 1999/45/EG and its amendments.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances/mixtures : Mixture

Preparation based on : Polyester, modified, Polylactide.



4. FIRST AID MEASURES

Effects and symptoms

- Eye contact : Immediately flush eyes with plenty of water for 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation : Remove the person to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact : Flush contaminated skin with plenty of water. Get medical attention for contaminated skin. Do not remove clothing adhering to skin.
- Ingestion : Wash out mouth with water and drink plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Most important symptoms and effects, both acute and delayed:

- Symptoms : There are no significant physical reactions known.
- Hazards : When used correctly, no special hazards are to be expected.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water spray, foam, powder, Carbon dioxide.

Special hazards arising from the substance or mixture:

Carbon monoxide, Carbon dioxide, tetrahydrofuran, smoke, carbon blacks. Health noxious fumes, the emergence of further decomposition and oxidation products depends upon the fire conditions.

Advice for firefighters:

Special protective equipment : Fire-fighters should wear appropriate protective equipment and self-contained breathing.

Danger depends on the burning material and the fire conditions. During a fire, toxic gases / vapors are formed. Clean fire debris and contaminated extinguishing water in accordance with official waste regulations.



6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid inhalation. Keep the material away from sources of ignition.

Environmental precautions:

No specific requirements.

Methods and material for containment and cleaning up:

Inclusion by mechanical equipment. Avoid dust formation. Make sure there is proper ventilation. Disposal of waste materials according official waste regulations.

Reference to other sections : See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

Precautions for safe handling:

Protective measures : Use with adequate ventilation. Avoid creating dusty conditions and prevent wind dispersal. Keep away from sources of ignition.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from sources of ignition. Prevent contamination with other materials in storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Given sufficient ventilation, levels below the limit values are perceived while working with the material.

Styrene (100-42-5) : TGG Value (8 hours) 107 mg/m³
 Tetrahydrofuran (109-99-9) : TGG Value (8 hours) 300 mg/m³
 KTG Value (15 minutes) 600 mg/m³
 Butane-1,4-diol (110-63-4)

Personal protection measures:

Personal protection must be chosen depending on activity and possible exposure. When working with melt, wear protective gloves.

Avoid contact of the melt with the skin. Wash hands and/or face after working with the material.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| | |
|---------------------------|---|
| Physical state | : Filament. |
| Colour | : Naturally opaque, dependent on the added pigment. |
| Odour | : Slight odor. |
| pH | : Not available. |
| Melting point | : 140 to 150 °C. |
| Initial boiling point | : Not applicable. |
| Softening range | : Not available. |
| Flash point | : >280 °C |
| Auto-ignition temperature | : >400 °C |
| Decomposition temperature | : >280 °C |
| Flammability (solid, gas) | : Not available |
| Density | : 0,8 – 1,4 g/cm ³ |
| Solubility | : Insoluble in the following materials: water. |
| Viscosity | : Not available |
| Explosion hazard | : Non-explosive |

10. STABILITY AND REACTIVITY

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|------------------------------------|--|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : This product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : Extreme heat and ignition sources. |
| Incompatible materials | : Strong oxidizing agents. |
| Hazardous decomposition products | : In case of prolonged and/or high thermal load above the decomposition temperature, hazardous decomposition products can be formed. |

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

After a single ingestion, the material is practically nontoxic. The product itself has not been tested. The given information is derived from the properties of the individual components.

| | |
|---------------------|-------------------------------|
| Polyester, modified | : LD50 rat (oral); 4000 mg/kg |
| Poly lactide | : LD50 rat (oral); 5000 mg/kg |

Irritation:

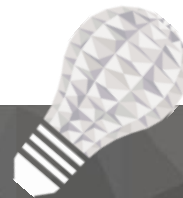
Not irritating to the eyes or skin. When used in a proper way, no irritation is expected.

Respiratory/skin sensitization:

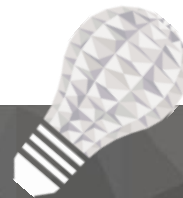
Does not work sensitizing according to animal studies.

Mutagenicity:

Data on mutagenic activity are not available.



| | |
|------------------------------------|---|
| Remarks | : When used properly, there will be no hazardous effects on humans health. |
| 12. ECOLOGICAL INFORMATION | |
| Toxicity | : Not available. |
| Persistence and degradability | : Biodegradable (based on material's structure). |
| Bioaccumulation | : Based on consistency and low water solubility, not likely. |
| Mobility in soil | : Not applicable. |
| Results of PBT and vPvB assessment | : Not applicable. |
| Other adverse effects | : No known significant effects or critical hazards. |
| 13. DISPOSAL CONSIDERATIONS | |
| Recommendation | : It is preferable to recycle the material, disposal on household waste disposal facilities and incineration are however possible. Discharge, treatment and/or disposal is subject to national, state or local regulations. |
| 14. TRANSPORT INFORMATION | |
| ADR / RID | : Not classified as a dangerous good under transport regulations |
| ADN/ADNR | : Not classified as a dangerous good under transport regulations |
| IMDG | : Not classified as a dangerous good under transport regulations |
| IATA-DGR | : Not classified as a dangerous good under transport regulations |



15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, this is described in this subsection.

Chemical Safety Assessment:

No chemical Safety Assessment had been carried out.

16. OTHER INFORMATION

-The information in this Material Safety Data Sheet (MSDS) is based on current knowledge and experience. No liability can be assumed for the accuracy and completeness of this information.

-Users should consider this information only as additional to other data gathered. Independent determination of suitability and completeness of information from all available sources is essential to ensure proper and safe use and disposal of these materials.

-The information in this MSDS applies for this specific material only. It therefore does not apply for its usage in combination with other materials or ways of processing.